UNITED STATES PATENT AND TRADEMARK OFFICE

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10/750,065	12/30/2003	Vladimir Savchenko	6570P061	9111

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _12 February 2008_.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-37_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _1-37_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _20080212_.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is filed in response to amendments received on **12 February 2008** in regard to Application# **10/750,056**. **Claims 1-37** are currently pending and have been considered below.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on **12 February 2008** has been entered.

Response to Arguments

3.   Applicant's arguments filed 12 February 2008 have been fully considered but they are not persuasive.

4.   In regard to **Claim 1,** Applicant argues:

a) <u>Newcomer</u> offers no express teaching of "...generating multiple views of the Web service implementation... ", since all that is relied upon in the rejection is Figure 5-2, which describes "a 'containment hierarchy' having various 'elements', 'fields' and 'key references' used to form '[r]elationships among data structures'"; and

b) since Newcomer is silent with respect to generating multiple views of a Web service implementation, there is insufficient support for claiming that Newcomer inherently discloses this limitation based on the figure cited.

5.   As to (a), examiner respectfully disagrees. First, Figure 5-2 *was not cited as* the sole basis of examiner's reasoning for rejecting the limitation in view of Newcomer, as stated by Applicant. Examiner cited the figure, which diagrams the basic structure of an entry in a UDDI registry, *in conjunction* with pg. 168, paragraphs 1-4, which describes the use of multiple "tModels" to provide multiple generic representation of a web service stored in a UDDI registry and made available to clients requesting a service. As such, Harvey in view of the teachings of Newcomer is sufficient to meet the claim limitation.

6.   As to (b), examiner respectfully disagrees. As noted above for (a), Newcomer gives an express teaching of generating multiple views of a web service. Therefore, the rejection previously made did not rely on inherency, as stated by Applicant.

7.   Since **Claims 2-37** were argued for the same reasoning as provided for **Claim 1**, the rejection of these claims stand for the same reasoning as provided for **Claim 1**.

Claim Rejections - 35 USC § 112

8.   As to The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9.   **Claims 1-37** are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

10.   As to **Claim 1,** this claim recites the step of "generating a plurality of Web service

definitions...", followed by the step of "generating multiple views of the Web service

implementation..." . As described in paragraphs [0018]-[0020] of Applicant's

specification, the generating of Web service definitions that are mapped to a virtual

interface *are* the multiple views of the Web service implementation. Therefore, the

"generating multiple views..." step is a mere repetition of the "generating a plurality of

Web service definitions..." step.

11.   As to **Claims 2-37**, these claims either through direct recitation or dependency,

suffer the deficiencies of **Claim 1. **Therefore, **Claims 2-37** are rejected for the same

reasoning as applied to **Claim 1.**

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

13.   **Claims 1-10, 17-30, and 33-35** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Harvey et al (US PG Pub: 2004/0205104), hereinafter Harvey, in

view Newcomer (Newcomer, Eric. Understanding Web Services: XML, WSDL, SOAP

and UDDI. Indianapolis, IN: Pearson Education, Inc. 2002.).

14.   As to **Claim 1,** Harvey discloses the invention substantially as claimed including

a computer-implemented method comprising:

        a) abstracting methods and parameters of a Web service implementation to a

virtual interface, wherein the methods and parameters are modifiable at the virtual

interface (para. [0065], [0088], [0145], [0277]) (The "UDDI servers" contain the

definitions for connecting to a web service. The stored "tModels" allow control of specific

implementations of a web service by particular users, thereby meeting this claim

limitation);

        b) generating a plurality of Web service definitions specifying one or more

behaviors of the virtual interface by mapping features and properties available at the

virtual interface to runtime features of the Web service implementation (para. [0076])

(Since the information contained within a UDDI registry contains information as to how

to access a service and not how that service is implemented, all information accessible

to a user via a UDDI registry is a generic representation of the actual implementation of

the service, thereby meeting the claim limitation);

        c) generating multiple views of the Web service implementation based on the

Web service definitions, wherein each of the multiple views is publishable as a separate

Web service(para. [0076]) (Since the information contained within a UDDI registry

contains information as to how to access a service and <u>not</u> how that service is implemented, all information accessible to a user via a UDDI registry is a generic representation of the actual implementation of the service, thereby meeting the claim limitation); and

      d) archiving the virtual interface and the Web service definitions in a Web service archive from which the virtual interface and the Web service definitions are retrievable (para. [0088]) (The "UDDI servers" meet this claim limitation).

15.   <u>Harvey</u> does not explicitly teach wherein multiple views are provided for the interface.

16.   <u>Newcomer</u> teaches wherein a UDDI servers can, in the public interface to the Web service office, allow for multiple different implementations of a service to be selected by a user (pg. 162, fig. 5-2; pg. 168, para. 1-4) (A business entity can have multiple "tModels" for the same "businessService" being offered, thereby offering many different implementations of the same service to be accessed.)

17.   It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of <u>Harvey</u> in view of <u>Newcomer</u>. One would have been motivated by <u>Harvey</u>'s explicitly stated effort to allow particular users access to only those "tModels" to which they are authorized, thereby enforcing whatever business model is in place for the services being offered.

18.   As to **Claim 2,** <u>Harvey</u> further teaches wherein abstracting methods and parameters of the Web service implementation to the virtual interface further comprises

indicating an operation of the Web service implementation to be exposed by the virtual

interface (para. [0071]) (The "UDDI registry" contains the information describing what

services can be accessed).

19.   As to **Claim 3,** Harvey further teaches wherein abstracting methods and

parameters of the Web service implementation to the virtual interface further comprises

providing a name for the operation to be exposed by the virtual interface (para. [0016],

[0029], [0060], and [0063]).

20.   As to **Claim 4**, Harvey further teaches wherein the operation includes a

parameter to provide a value for the operation and wherein abstracting methods and

parameters of the Web service implementation to the virtual interface comprises altering

a characteristic of the parameter (para. [0112]-[0120]).

21.   As to **Claim 5**, wherein altering the characteristic of the parameter includes

at least one of:

        a) providing a name for the parameter (para. [0112]-[0120]);

        b) providing a default value for the parameter (para. [0126] – [0130]).

22.   As to **Claim 6,** Harvey further teaches abstracting methods and parameters of

the Web service implementation to a second virtual interface (para. [0121]-[0123], and

[0172]-[0178]) (The use of "aliases" meets this claim limitation).

23. As to **Claim 7,** <u>Harvey</u> further teaches wherein generating each Web service definition comprises providing a name for the Web service definition (para. [0126]-[0136], Fig. 7, and Fig. 11) (The name of the service being accessed is mapped to the structure of the LDAP/x.500 directory using the submitted name, thereby meeting the claim limitation).

24. As to **Claim 8,** <u>Harvey</u> further teaches wherein generating each Web service definition further comprises specifying an authentication level for the Web service definition (para. [0106]-[0108]) (Users are given access to only the sub-tree of services associated with the accessed service).

25. As to **Claim 9,** <u>Harvey</u> further teaches wherein generating each Web service definition further comprises specifying a transport guarantee type for the Web service definition (para. [0084], [0121]) (Aliases are used to offer a guarantee of data integrity when used in a distributed system, thereby meeting the claim limitation).

26. As to **Claim 10,** <u>Harvey</u> further teaches wherein generating each Web service definition further comprises indicating an authorization level for the Web service definition (para. [0073]-[0077]).

27.   As to **Claims 17-27,** being directed to the application server implementing the

method of **Claims 1-10**, these claims are rejected for the same reasoning as applied to

Claims 1-10.

28.   As for **Claims 28-30**, being directed to the system implementing the method of

Claims 1, 2 and 8, these claims are rejected for the same reasoning as applied to

Claims 1, 2, and 8.

29.   As to **Claims 33-35,** being directed to the article of manufacture containing a

medium with instructions implementing the method of **Claims 1, 2 and 8,** these claims

are rejected for the same reasoning as applied to **Claims 1, 2, and 8**.

30.   **Claims 11-16, 31, 32, 36, and 37** are rejected under 35 U.S.C. 103(a) as being

unpatentable over <u>Harvey</u> in view of <u>Newcomer</u> and further in view of the <u>BEA</u>

<u>WebLogic Server 6.1</u>, hereinafter <u>BEA</u>, as described by "Web Applications Basics"

(BEA Systems Website. "Web Applications Basics". Accessed 21 June 2007. Published

2001), hereinafter <u>BEA1</u> and "web.xml Deployment Descriptor Elements" (BEA

Systems Website. "web.xml Deployment Descriptor Elements". Accessed 21 June

2007. Published 2001), hereinafter <u>BEA2</u>.

31.   As to **Claim 11,** <u>Harvey</u> and <u>Newcomer</u> disclose the method of **Claim 1**, but do

not explicitly teach creating a Web service deployment descriptor to describe a

configuration of one of the plurality of Web service definition.

32.   <u>BEA</u> explicitly teaches creating Web service deployment descriptors to describe

a configuration of Web service definitions (<u>BEA1</u>; para. 1).

33.   It would have been obvious to one of ordinary skill in the art at the time of

invention to modify the method disclosed by <u>Harvey</u> with the teachings of <u>BEA</u>. One

would have been motivated by the fact that using a deployment descriptor to implement

a web services platform is a standard component of the Java J2EE specification for

developing web services (<u>BEA1</u>; para. 1). Since the use of the J2EE architecture was

well known at the time of invention, one would reasonably see it as an option for

implementing the method disclosed by <u>Harvey</u>.

34.   As to **Claim 12,** <u>Harvey</u> in view of <u>BEA</u> further teaches wherein archiving the

virtual interface and the Web service definitions in the Web service archive comprises:

        a) packing virtual interface and the Web service definition in a deployable

container (<u>BEA</u>1; pg. 1, para. 1); and

        b) wherein the method further comprises packing the Web service deployment

descriptor in the deployable container (<u>BEA</u>1; pg. 1, para. 1).

35.   As to **Claim 13,** <u>Harvey</u> in view of <u>BEA</u> further teaches wherein creating the Web

service deployment descriptor further comprises specifying a name for the configuration

of the Web service definition described, at least in part (BEA2; pg. 6-7) (The "servlet"

element meets this claim limitation).

36.   As to **Claim 14**, Harvey in view of BEA further teaches wherein creating the Web

service deployment descriptor further comprises specifying a transport binding for the

configuration of the Web service definition described (Harvey; para. [0285]).

37.   As to **Claim 15,** Harvey in view of BEA further teaches wherein creating the Web

service deployment descriptor further comprises specifying an authentication protocol

implementation for the configuration of the Web service definition described (Harvey;

para. [0285]).

38.   As to **Claim 16**, wherein creating the Web service deployment descriptor further

comprises providing an address for the configuration of the Web service definition

described (BEA2; pg. 6 and pg. 9) (The "filter mapping" and "servlet mapping" elements

meet this claim limitation).

39.   As to **Claims 31 and 32**, being directed to the system implementing the method

of **Claims 11 and 14**, these claims are rejected for the same reasoning as applied to

Claims 11 and 14.

40.   As to **Claims 36 and 37**, being directed to the article of manufacture containing a

medium with instructions implementing the method of **Claims 11 and 14**, these claims

are rejected for the same reasoning as applied to **Claims 11 and 14.**

Conclusion

41.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Fletcher et al (US Pat: 6,985,939) discloses a method of

aggregating multiple services into a newly presented web service and registering that

new aggregated service to allow for discovery and access of said new service.

42.   Examiner has cited particular columns and line numbers and/or figures in the

references as applied to the claims for the convenience of the applicant. Applicant is

respectfully reminded that rejections are based on references as a whole and not just

the cited passages. Although the specified citations are representative of the teachings

in the art and are applied to the specific limitations within the individual claim, other

passages and figures may apply as well. It is Applicant's responsibility to read and

understand the reference, as a whole, before preparing a reply to this Office Action.

Therefore, it is respectfully requested from Applicant, in preparing the responses, to fully

consider the references in entirety as potentially teaching all or part of the claimed

invention, as well as the context of the passage as taught by the cited art or disclosed

by the examiner.

Contact Information

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Richard Pantoliano, Jr. whose telephone number is
(571)270-1049 and whose direct fax number is (571) 270-2049. The examiner can
normally be reached on Monday-Thursday, 8am – 4pm EST. Please note that a
request for an interview in regard to the present application should be accompanied by
a written agenda (***including proposed amendments***, if available, and ***specific issues***
to be discussed) sent to the fax number cited above.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Meng An can be reached on (571)272-3756. The fax phone number for the
organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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03/28/2008

/Li B. Zhen/
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